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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,251	10/04/2005	Mitsuru Kitada	80333(47762)	6446
21874 7590 02/29/2008 EDWARDS ANGELL PALMER & DODGE LLP P.O. BOX 55874 BOSTON, MA 02205				
EXAMINER				
MATOCHIK, THOMAS L				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
02/29/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/552,251

Applicant(s)

KITADA ET AL.

Examiner

THOMAS MATOCHIK

Art Unit

1796

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
- Paper No(s)/Mail Date 12/18/07.
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

The applicant's response to the office action mailed on 12/18/2007 was received. Applicant's arguments, see declaration under 37 CFR § 1.132, filed 12/18/2007, with respect to the rejection(s) of claim(s) 1-7 under 35 USC § 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art references.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobs (US 5,194,487) in view of Wallon et.al (US 5,308,914).

Regarding claims 1-3 and 5-7: Jacobs teaches a two component aqueous polyurethane composition comprising (A) a polyurethane, (B-2) a polyether polyol and (II) a water dispersible polyisocyanate capable of reacting with a hydroxyl group (col. 1, lines 62-67 and col. 2, lines 14-18).

The polyurethane, (A), is obtained by condensing a polyol with an aromatic or aliphatic dicarboxylic acid (col. 3, lines 50-68) and further reacting the polyester polyol

with a polyisocyanate (col. 3, lines 12-22). The phthalic acid content of (A) based on its urethane group is between 9 and 20% by weight (col. 3, lines 6-7). The liquid polyol (B) has a molecular weight range between 62 and 1000 (col. 2, lines 40-55). Jacobs further teaches the urethane/urea group content to be between 9 and 20% by weight of the polyurethane (col. 3, line 7). If the content is 10% by weight of 1000 grams, then there is 100 grams of urethane/urea functionality. The CONH molecular weight is 43. There will be approximately 2.4 moles of CONH present.

Jacobs does not teach (B-2) being an aromatic polyether polyol or (B1) being an aromatic polyester polyol. However, Wallon teaches an aqueous dispersion containing a polyurethane and an adhesion improving polymer (col. 1, lines 4-8). The adhesion improving polymers are selected from a wide range of materials including polyethers (col. 5, lines 63-68) and low viscosity aromatic polyesters (col. 6, lines 3-22). The aromatic group can be selected from phthalic acids (col. 6, lines 11-12). If the polyester is prepared from phthalic acid or isophthalic acid (col. 3, line 68) and butanediol (col. 4, line 10), the aromatic content is approximately 30% by weight.

Jacobs does not teach that polyols and the polyurethane, (A), are not chemically bonded to each other. However, Wallon teaches the addition of the adhesion improving polymer, the polyester polyol, to the composition prior to the formation of the polyurethane and the NCO content of the mixture is close to or at zero (col. 6, lines 58-68) so that there will be no reaction between the polyester polyol and the polyurethane.

Jacobs and Wallon are analogous art namely, aqueous based polyurethane coating compositions. At the time the invention was made, a person having ordinary

skill in the art would recognize that a combination of the composition of Jacobs with the teaching of Wallon relative to a polyester polyol component in the aqueous polyurethane would lead to a coating with enhanced adhesion properties.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobs (US 5,194,487) in view of Wallon et.al (US 5,308,914) as applied to claims 1-3 and 5-7 above, and further in view of Blank (US 3,960,983).

Regarding claim 4: Jacobs teaches the basic claimed composition as set forth in claims 1-3 and 5-7 above. Jacobs does not teach that the polyether polyol (B-2) is a propylene oxide adduct of a polynuclear phenol compound.

However, Blank teaches incorporating water dilutable polyether polyol resins in combination with an aminoplast crosslinking agent to form a useful coating composition (col. 1, lines 55-68 and col. 3, lines 38-47). Further, he teaches these polyether polyols are prepared from bisphenolic monomers and alkylene oxides such as propylene oxide (col. 2, lines 1-13 and lines 48-52). Jacobs and Blank are analogous art namely, polyol containing aqueous coating compositions. At the time the invention was made a person having ordinary skill in the art would be motivated to incorporate the aromatic polyether polyols of Blank with the aqueous polyurethane coating compositions of Jacobs to achieve high solids content aqueous compositions and mar resistant, flexible coatings.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS MATOCHIK whose telephone number is (571)270-3291. The examiner can normally be reached on Monday-Friday 7:30 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo/
Supervisory Patent Examiner, Art Unit 1796
February 28, 2008

TLM
2/21/2008